DOCUMENT RESUME

ED 141 433 UD 016 927

AUTHOR	Carlin, Thomas; And Others
TITLE	Analytical Support for Cost-of-Living Differentials in the Poverty Threshold. The Measure of Poverty, Technical Paper XV.
INSTITUTION	Department of Health, Education, and Welfare, Washington, D.C. Office of the Assistant Secretary for Planning and Evaluation.
PUB DATE	19 Oct 76
NOTE	55p.; For related documents, see UD 016 918-929 and UD 017 087; Best copy available
AVAILABLE FROM	Office of the Assistant Secretary for Planning and Evaluation, Department of Health, Education and Welfare, 200 Independence Avenue, S.W., Room 443D-South Portal Building, Washington, D.C. 20201
EDRS PRICE	MF-$0.83 HC-$3.50 Plus Postage.
DESCRIPTORS	Clothing; *Consumer Economics; *Cost Indexes; Costs; *Definitions; Food; Housing; Income; Low Income; *Low Income Groups; *Poverty Research
IDENTIFIERS	*Cost of Living

ABSTRACT

In this report, all readily available federal consumption data (as of July 1975) are analyzed for differences in the costs of consuming food, clothing, housing and other expenditures using several residential definitions. There were two specific objectives to this study: (1) to analyze the data on the cost of these items for differences among various residential classifications for the U.S., and (2) to determine to what extent the analysis of available information could support differentials in the poverty definition based on residence. Two approaches were used in this analysis. The first involved exploring available data from a variety of sources to obtain insights into variations in the living cost. This survey approach concentrated on data made available since the 1960-61 Consumer Expenditure Survey, the most recent readily available nationwide source on expenditure patterns. The second approach explored the possibility of obtaining variations in family living costs by residence using a budgeting technique. It is concluded that there appears to be no strong basis upon which to make a decision concerning residential differentials in a poverty threshold using available consumption data. Although differences in food and housing costs were apparent among various residential classifications, it would be difficult to develop simple residential differentials that would be equitable. The interaction between these two items and other components of the family budget is also unclear. Any decision on cost-of-living differentials would still be arbitrary without better data as a basis for judgment. (Author/AM)

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THE MEASURE OF POVERTY

Technical Paper XV

Analytical Support for Cost-of-Living Differentials in the Poverty Threshold

By: Economic Research Service
U.S. Department of Agriculture

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U.S. Department of Health, Education, and Welfare

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October 19, 1976

Virginia Trotter
Assistant Secretary for Education
Department of Health, Education,
and Welfare

William A. Morrill
Assistant Secretary for Planning
and Evaluation
Department of Health, Education,
and Welfare

I am pleased to forward Technical Paper XV, "Analytical Support for Cost-of-Living Differentials in the Poverty Threshold". It contains supporting data for the report entitled The Measure of Poverty which was prepared in compliance with section 823 of the Education Amendments of 1974. This report is based on a study compiled by the Economic Research Service, Department of Agriculture, for use by the Poverty Studies Task Force, with financial support provided by the Office of the Assistant Secretary for Education, Department of Health, Education and Welfare. The views presented are those of the individual authors and not those of the Task Force as a whole. In this report all readily available Federal consumption data (as of July 1975) are analyzed for differences in the costs of consuming food, clothing, housing and other expenditures using several residential definitions.

Bette Mahoney

Bette Mahoney
Chairman
Poverty Studies Task Force

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PREFACE

Section 823 of the Education Amendments of 1974 (PL 93-380) requires a thorough study of the manner in which the relative measure of poverty for use in the financial assistance program, authorized by Title I of the Elementary and Secondary Education Act of 1965, may be more accurately and currently developed.

That financial assistance program is administered by the Commissioner of Education, through the Office of Education, Department of Health, Education, and Welfare. An important feature is the use of a formula prescribed by Section 103 of the Elementary and Secondary Education Act for the annual distribution of Federal funds to school districts. A significant factor in the formula is the number of school-age children 5 to 17 in poor families within each school district. The measure of poverty which is used, and which is the subject of the study mandated by Section 823, is the Federal government's official statistical definition of poverty (also known as the Orshansky, OMB, Census Bureau, or Social Security poverty lines).

Other work related to poverty measurement has been called for in recent legislative acts. In the Comprehensive Employment and Training Act, the Secretary of Labor is directed to develop and maintain comprehensive household budget data at different levels of living, including a "level of adequacy." Any such review of the level of adequacy must necessarily be closely related to measures of poverty. The Housing and Community Development Act of 1974 gives the Secretary of HUD authority to adjust the poverty measure to reflect local variations in the cost of living. The Conference Report accompanying it directs the Secretary to develop or obtain data with respect to the "extent of poverty" by metropolitan areas and to submit such data to the Congress as part of a March 31, 1977, report.

Because of the broad scope of the subject matter, coverage of the study of the measure of poverty mandated by Section 823 of the Education Amendments of 1974 was extended to include implications of the study findings for the poverty-related programs of all affected Federal departments and agencies. The Title I program of the Elementary and Secondary Education Act was given the most detailed treatment, to meet the legislatively-mandated specifications for the study as well as to serve as a primary example of application of the concepts of poverty measurement to Federal programs. The findings of the study are published in a report entitled, "The Measure of Poverty." An important objective of the study was full discussion and documentation of the major elements of currently applied and potentially usable poverty measures. Material containing essential supporting documentation for the study was assembled as technical papers. These have been written to stand alone as complete technical treatments of specific subjects.

The study was performed under the direct guidance of a Poverty Studies Task Force of the Subcommittee on the Education of the Disadvantaged and Minorities, Federal Inter-Agency Committee on Education. Technical papers were prepared at the request of, under the direction of, and subject to review by the Task Force members. Some papers are primarily the work of one or two persons; these are attributed to their authors. Others result from the collective input of Task Force members or advisors and no specific attribution is given except to the Task Force, as a whole.

The following listings show members of the Poverty Studies Task Force by appropriate Federal departments and agencies, and the titles and authors of the technical papers.

This report contains Technical Paper XV, "Analytic Support for Cost-of-Living Differentials in the Poverty Thresholds." The report was prepared by Thomas A. Carlin, Project Coordinator and General Compiler, Gladys Caspar, Christine Hager, Linda Hatcher, Ronald Kampe, Corinne LeBovit, and Clara Rice.

To obtain copies of the report, "The Measure of Poverty," or any of the technical papers, please write to:

Office of the Assistant Secretary for Planning and Evaluation
Department of Health, Education, and Welfare
200 Independence Avenue, S.W.
Room 443D - South Portal Building
Washington, D. C. 20201

Federal Interagency Committee on Education
Subcommittee on Education for the Disadvantaged and Minorities

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Staff Director
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for Planning and Evaluation

Julie Jervey Mitchell
Research Assistant
Office of the Assistant Secretary
for Planning and Evaluation

TECHNICAL PAPERS

I.	Documentation of Background Information and Rationale for Current Poverty Matrix	Mollie Orshansky Social Security Administration
II.	Administrative and Legislative Usages of the Terms "Poverty," "Low Income," and Other Related Terms	Poverty Studies Task Force with assistance from Ellen Kraus
III.	A Review of the Definition and Measurement of Poverty	Urban Systems Research and Engineering, Inc.
IV.	Bureau of Labor Statistics Family Budgets Program	Mark Sherwood Bureau of Labor Statistics
V.	The Consumer Price Index	Jill King Mathematica, Inc.
VI.	Wealth and the Accounting Period in the Measurement of Means	Nelson McClung and Eugene Steuerle Department of the Treasury
VII.	In-Kind Income and the Measurement of Poverty	Janice Peskin Health, Education, and Welfare
VIII.	The 1972-73 Consumer Expenditure Survey	Jill King Mathematica, Inc.
IX.	Inventory of Federal Data Bases Related to the Measurement of Poverty (A) Non-Census Data Bases (B) Census Data Bases	Connie Citro, Mathematica, Inc. Bureau of the Census
X.	Effect of Using a Poverty Definition Based on Household Income	Jack McNeil, Doug Sater, Arno Winard Bureau of the Census
XI.	Update of the Orshansky Index	Mollie Orshansky Social Security Administration
XII.	Food Plans for Poverty Measurement	Betty Peterkin Department of Agriculture
XIII.	Relative Poverty	Jack McNeil Bureau of the Census
XIV.	Relative Measure of Poverty	Stanley Stephenson Health, Education, and Welfare
XV.	Analytic Support for Cost-of-Living Differentials in the Poverty Thresholds	Thomas Carlin Department of Agriculture
XVI.	Implications of Alternative Measures of Poverty on Title I of the Elementary and Secondary Education Act	Abdul Khan and Herman Miller Health, Education, and Welfare
XVII.	The Sensitivity of the Incidence of Poverty to Different Measures of Income: School-aged Children and Families	Survey Research Center University of Michigan
XVIII.	Characteristics of Low-Income Populations Under Alternative Poverty Definitions	Lawrence Brown Health, Education, and Welfare

ACKNOWLEDGEMENT

This report is based on a study compiled by the Economic Research Service, USDA, for use by the Poverty Studies Task Force, Office of the Assistant Secretary for Planning and Evaluation, DHEW, pursuant to Section 823 of Public Law 93-380, Education Amendments of 1974. Financial support was provided by the Office of the Assistant Secretary for Education, DHEW, under reimbursable agreement number A00-75-035.

Public Law 93-380 required that a study be undertaken of the measures of poverty used in administering Title I of the Elementary and Secondary Education Act of 1965. Congress specifically requested that adjustments for regional, climatic, metropolitan, urban, suburban, and rural differences be included in the analysis.

The following people helped prepare material for this report.

Thomas A. Carlin - Project Coordinator and
General Compiler

Gladys Caspar - Statistical Support

Christine Hager - Clothing

Linda Hatcher - Secretarial Support

Ronald Kampe - Housing

Corinne LeBovit - Food

Clara Rice - Statistical Support

SUMMARY

The present residential differential in the poverty threshold was introduced in the mid-1960's. This differential for farm families was based on the assumption that farmers produce some of their own food, thus, needed less money income in order to enjoy a standard of living comparable to urban residents. Since that time, many have argued for including additional residential differentials to accommodate cost-of-living differences among regions, cities, etc. Others have argued that the current farm differential unduly discriminates against farmers and that any residential differential is inequitable. These issues become increasingly critical as more and more Federal programs incorporate the poverty definition into formulas for distributing funds.

Statistically reliable consumption data are important in helping to justify the need for residential differentials in a poverty threshold based on a needs standard. In this report all readily available Federal consumption data (as of July 1975) are analyzed for differences in the costs of consuming food, clothing, housing, and other expenditures using several residential definitions. Major emphasis is placed on data available since the Bureau of Labor Statistics' 1960-61 Consumer Expenditure Survey.

Analysis of the 1965 Household Food Consumption Survey suggests the key issue concerning differentials in food expenditure between urban and rural areas was home-produced food. This, of cource, was the central argument for the original farm differential in the current poverty threshold. Producing food at home does involve costs, both direct cash outlays and indirect opportunity costs, or the income possibilities foregone by committing land, labor, or capital resources to home production. Two pricing systems were used in an attempt to capture these costs. When home-produced food was valued at retail prices, what would have been spent for the same food in a retail store, there was only a 7 to 8 percent difference in expenditures between urban and rural families. Valuing food at farm prices increases the differential between urban and rural nonfarm families to 10 percent and to 20 percent between urban and farm families.

The meager data available suggest that there is no appreciable difference in clothing expenditures between urban and rural families. For example, all families have access to clothing of similar quality at similar prices through mail-order catalogs. Families in rural areas also shop in stores similar to those used by urban families. Data are not available to isolate the effect of urbanization on clothing needs. Regional variations in clothing expenditures also appear to be minimal. The only available survey data (as of July 1975) for answering this question are from the 1960-61 CEX which are quite outdated. Part of the lack of regional variations in clothing expenditures can be attributed to the wide climatic variations within regions.

Housing was one area where considerable residential variation occurred both by region and by urbanization. In terms of shelter (rents and value), there was little difference in median outlays between many rural areas and

urban places of 2,500 to 50,000 population. Within some regions, rural housing was more costly than in central city areas. Among regions, housing outlays tend to be lower in the South. Median values and rents appear to be about 20 percent higher in metro than in nonmetro areas. However, rental units are less prevalent outside cities. Financing arrangements also affect ownership costs. In rural areas, repayment periods are shorter and interest rates are higher on home loans.

Housing outlays for maintenance, repairs, and improvements are lower in nonmetro areas. However, these expenditures are not always lower than similar outlays in central cities of SMSA's, particularly in the Northeast and West. Utility costs are also an important factor in housing differentials. Rural households heat more often with L-P gas, a high-priced fuel, and less often with natural gas. There is little information, however, on how this might affect housing differentials.

There is little hard evidence that transportation costs are considerably higher in rural areas. Rural households do travel more miles, but with less stop-and-go driving, they tend to get better mileage. The biggest difference in the transportation situation between rural and urban families is the lack of public transportation in rural communities.

The lower tax rates evidenced in nonmetro areas appear to carry with them lower quantity and quality community services, especially those special services vitally important to low-income people. Research in this area is sketchy, but one recent study suggests that the real costs of services in rural America are much higher than direct outlays might suggest. Health care is a good example. The shortage of physicians is more acute in rural areas; patients tend to drive longer distances to obtain health services, emergency health services are more likely to be deficient, work-related injury rates are higher, and a comprehensive approach to health care delivery is less likely to be present.

There has yet to be a cross-sectional consumption survey or a set of hypothetical family expenditure budgets which adequately represents all elements of American society using the same methodology and statistical design. Most existing consumption data either sufficiently samples only a limited residential group, such as urban wage earners, or covers only a limited consumption category, such as housing. Family expenditure budgets cannot be developed for a variety of residential classifications from existing data. Data utilized by the Bureau of Labor Statistics in their annual budget for an urban family of four could not be satisfactorily matched with annual data collected by the U.S. Department of Agriculture for use in computing the index of prices paid by farmers for family living because of two factors. First, quality control was a serious problem in comparing data for items priced by both agencies. Second, the number of items which did "match," given the quality control problems, was too small on which to base global results.

There appears to be no strong basis upon which to make a decision concerning residential differentials in a poverty threshold using available consumption data. Although differences in food and housing costs were apparent among various residential classifications, it would be difficult to develop simple residential differentials that would be equitable. The interaction between these two items and other components of the family budget is also unclear. Any decision on cost-of-living differentials would still be arbitrary without better data as a basis for judgment.

ANALYTICAL SUPPORT FOR COST-OF-LIVING DIFFERENTIALS IN THE POVERTY THRESHOLD

INTRODUCTION

The first residential differential was introduced into the current poverty definition in the mid-1960's. This differential for farm families, currently 15 percent, was based on the assumption that farmers produced some of their own food, thus, needed less money income in order to enjoy a standard of living comparable to an urban resident. 14/ Many have suggested that similar regional differentials should be introduced, arguing, for example, that it costs less to live in the South than in the North. Others have argued that the current farm differential unduly discriminates against farmers and that any residential differential is inequitable. These issues become increasingly critical as more and more Federal programs incorporate the poverty definition into formulas for distributing funds.

The current poverty definition was built around both a needs standard and information concerning the consumption behavior of people. 14/ The needs standard involved food consumption and the concept of a nutritionally adequate diet. Once nutritional needs were specified, a low-cost diet was developed which satisfied these needs, thus, the concepts underlying the economy food plan. Observations of consumer expenditure patterns showed that families spend one-third of their income on food. This observation told us something about the consumer's preference for food versus nonfood items. These notions -- nutritional adequacy and consumption preferences -- were all merged into the poverty definition. Thus, the issues surrounding differentials in the poverty threshold were not purely economic, that is, they involve more than price.

Two elements in addition to income interact in determining how much a consumer will spend on a particular consumption category. The first is price which, to a great degree, is purely economic. The other element is the quantity desired. Quantity encompasses aspects of both a physical amount and quality considerations. Social and psychological elements play as large a role, or larger, in helping to specify quantity consumed than does price. Thus, when someone argues that it is cheaper to live in place A than in place B, one is uncertain as to whether prices are lower in area A or the life style in area A differs from that in B or both. One recent study analyzed the cost of the Bureau of Labor Statistics' (BLS) intermediate budget standardized for differences in the composition of the market basket between regions and discovered that such standardization "leads to a reduction in the interarea differential in consumption costs between areas of highest and lowest cost." 15, p. 11/ This result suggests that life style does play a role in explaining regional differentials in living costs. This distinction becomes important when establishing residential differentials in the poverty threshold. If the basis of a differential is primarily life style, then people not conforming to the prominent life style in a region could be penalized. What is more, if the prevailing life style is continually changing, then the differential must continually change to accommodate the situation. This has been the justification for the reexamination of the farm differential in the current poverty definition.

There were two specific objectives of this study. First, to analyze available data on the cost of consuming food, clothing, housing, and other items for differences among various residential classifications for the United States, and second, to determine to what extent the analysis of available information could support differentials in the poverty definition based on residence.

PROCEDURES

Two approaches were used in this analysis. The first approach involved exploring available data from a variety of sources to obtain insights into variations in living costs. This survey approach concentrated on data made available since the 1960-61 Consumer Expenditure Survey (CEX), the most recent readily available nationwide source on expenditure patterns. Detailed data from the 1972-73 BLS Consumer Expenditure Survey was not available in time for use in this paper. Some information from the diary portion of the survey will be referred to later in the paper. Such sources as the 1965 USDA Food Consumption Survey, the 1970 Census of Housing, the Federal Highway Administration's 1969 National Transportation Study, and others were used. The second approach explored the possibility of obtaining variations in family living costs by residence using a budgeting technique. The basic idea behind this approach was to specify a particular market basket of goods and services for a given size family under a specified life style. These goods and services would then be priced in different residential areas. Differences in costs would then be assumed to reflect differences in prices paid. The effect of variations in life style would also be explored by varying the components of the market basket. This approach would utilize data collected by BLS and the U.S. Department of Agriculture (USDA) and was referred to as a budget "match."

Three basic sets of residential definitions are referred to throughout the report. The definition of residence in any study such as this is extremely important. There is a variety of residential or geographic variations which could be explored. For example, political boundaries such as states or counties, incorporated places with alternative population densities, and regions like North or South are most often the bases for residential classification. Sometimes the type of industry, such as farming, forms the basis of the definition. On other occasions, geographical characteristics such as high plains, mountains, or coastal plains constitute the definition. Distinctions based on one residential classification system may not apply under an alternative system, thus, generalizations are often not possible. Additional data are required to provide consistent, statistically reliable expenditure estimates for many proposed alternative classification systems. Standard Metropolitan Statistical Areas (SMSA's) refer to a county or group of contiguous counties which contain at least one city of 50,000 inhabitants or more, or "twin cities" with a combined population of 50,000 or more. Nonmetro areas refer to areas outside official SMSA counties. The metropolitan classification differs technically from the urban-rural classification. The urban population consists of all persons living in places of 2,500 inhabitants or more incorporated as cities, villages, boroughs, and towns. The rural population includes those persons living outside urban areas. The rural

population can be divided into two groups, the rural farm population, which includes rural people residing on farms, and rural nonfarm people. When the terms farm and nonfarm are used as a dichotomy, the nonfarm population includes the rural nonfarm and urban groups. These two classification systems are not mutually exclusive, that is, elements of the rural population, for example, can be found in SMSA's. In the report, some data are presented using one classification system, some another, and some using both. This is an inherent, almost unavoidable, problem when a variety of data is used. A third system based on political units is also referred to. Incorporated places are defined as political units incorporated as cities, boroughs, towns, and villages. Unincorporated places are closely settled population centers without corporate limits.

VARIATIONS IN FAMILY LIVING COSTS

Insights into the quality and quantity of goods and services consumed by rural and urban households can be obtained from a variety of sources. The most recent, readily available nationwide source of data on the consumption patterns of urban and rural people is the 1960-61 Consumer Expenditure Survey (CEX), now 15 years old. Detailed data from the 1972-73 CEX were not available for statistical analysis at the time of this writing (July 1975). However, the 1965 Household Food Expenditure Survey, conducted by USDA, provides some insight into food consumption patterns. Housing characteristics are available from the 1970 Census of Population and Housing. Differences in the characteristics of rural and urban transportation can be obtained from the 1969-70 National Transportation Study. Other data provide insights into clothing costs and the nature of medical services.

This section is presented in two parts. First, a review of study findings based on the 1960-61 CEX data concerning rural-urban differences in consumption will be developed, and second, analysis of the other data sources available since the 1960-61 CEX will be presented.

REVIEW OF 1960-61 CEX STUDIES

Murphy 13/ analyzed tabulations on spending and savings patterns of families in urban and rural areas. In general, the level of income and expenditure was lower in rural than in urban areas. Data for all U.S. families showed urban and rural nonfarm families spending about the same proportion of before tax income for current living, while farm families spent about 10 percent less. The proportion of expenditures associated with shelter was considerably less in rural areas because a higher proportion of rural residents are home owners. However, the higher proportion of expenditures associated with transportation costs in rural areas helped to offset some of the difference. Some of the gross differences between rural and urban family expenditures were reduced when nearness to a metropolitan area (SMSA) was considered. In general, families outside SMSA's had lower incomes and lower associated expenditures than their metro counterparts.

Murphy also controlled for income in the tabulations. Similar contrasts in spending patterns between urban and rural families emerged at each income level. Those with incomes below $3,000 (1960-61 dollars) went into debt to maintain spending levels. Farm families, however, incurred almost three times the dissavings of urban families and more than four times the dissavings of rural nonfarm families. At the higher income levels, farm families saved considerably more of their income than their urban and rural nonfarm counterparts. Murphy attributed the apparent greater thriftiness of rural people to their association with self-employment rather than to where they lived. The tabulations showed a similar frugality on the part of urban self-employed families. Thus, difference in consumption and savings between rural and urban families was, in part, due to the higher proportion of self-employed families in rural areas.

Murphy did note significant diminishing of urban-rural income and spending differences between 1941 and 1961. Murphy attributed this "narrowing of the

gap" to outmigration from rural areas and increasing tendency of farmers to hold nonfarm jobs.

Madden et al. utilized the 1960-61 Consumer Expenditure Survey to explore equivalent levels of living between rural and urban families. 10/ The key assumption in their analysis was that two families are at the same level of living if they can afford the same level of food expenditure. The authors developed a set of multiple regression equations to estimate various expenditure components. The required income, based on equal food expenditure, was then obtained by adding the estimated expenditures for a given set of family and urbanization characteristics.

Madden found that the required income, consistent with the economy food plan, varied by region, urbanization, and by family size and type. For example, farm families of a comparable size and type would require 70 percent as much income in the North Central and 90 percent as much income in the South as an urban family. In the North Central region, rural nonfarm families of four, with the oldest child 6 to 17 years, who owned homes, required more income than their urban counterparts; the same family renting in the South would also require more income. The authors indicated that their analysis controlled only for food and failed to consider the quality differences of other goods and services between rural and urban areas.

Lee and Phillips analyzed differences in consumption patterns in farm and nonfarm households using the 1960-61 CEX. 9/ The authors were concerned with but four basic dependent variables: income, household size, region, and urbanization. Their results "indicated that consumption patterns differ significantly...for the U.S. as a whole, although differences are not as marked on a regional basis". 9, p. 581/ When the authors controlled for income variability (farm household incomes are more variable than nonfarm), similar differences emerged, although a small number of items became insignificantly different. Differences between farm and nonfarm groups were the same when levels of income and family size were also held constant. The authors suggested that price variations may also play an important role in differences in consumption patterns, but the analysis of price differences required time series data which are not available.

Several points emerge from these studies. Although there appear to be differences in the expenditure patterns of rural and urban families, other variables besides residence affect these results. The other variables include income, family size and type, and price. The effect of one of these variables differs for different levels of urbanization. Thus, consumption behavior varies among families within a residential category as well as among residents. A single residential differential in a poverty threshold would not treat all families equitably. Secondly, differences in consumption patterns between rural and urban families may well be diminishing. Further exploration of the changing consumption patterns of rural families must await the 1972-73 CEX data. Finally, cross-sectional data, such as the decennial CEX, does not provide all the insights necessary to analyze completely rural-urban differences in expenditure behavior. Price is one

important factor in explaining consumption behavior, and such analysis can only be accomplished using time series data.

Expenditures for food, clothing, and housing constitute an important component of family expenditures. For example, these items amounted to 72 percent of total family consumption for an urban family of four persons on a lower standard budget in autumn 1974. 28/ These three items amounted to 49.5 percent of total expenditures for family living reported by farm-operator families in 1973. 21/ Transportation costs accounted for 28.8 percent of total expenditures for farm-operator families, the largest expenditure component. Motor vehicle purchases accounted for over 70 percent of total transportation expenditures in 1973. Farm incomes were also the highest on record in 1973. This may account for the apparently high transportation costs reported by farm-operator families in the 1973 survey. Expenditures in these categories and others will be explored below.

FOOD

Residential differences in the cost of feeding a family were examined from several perspectives using two sources of data, the diary portion of the 1972-73 BLS Consumer Expenditure Survey and the 1965-66 USDA Household Food Consumption Survey. 20,29/

Comparisons from 1972-73 Consumer Expenditure Survey

Limited data from the diary portion of the CEX are available for tentative analyses of rural-urban differences in food expenditures. Data are tabulated for urban and rural families inside and outside SMSA's. Per capita spending for food appears much higher for urban than for rural families inside SMSA's, but varies little in relationship to degree of urbanization outside of SMSA's (Table 1). Therefore, what appear as overall urban-rural differences reflect largely the inside-outside SMSA difference.

Value of Home-Produced Food: Results from the 1965-66 Household Food Consumption Survey

It is generally assumed that rural people need to purchase less food because of home production. The importance of home-produced food in the family budget for any residential group hinges on the extent to which families participate in home production and the value attributed to it. Home-produced food included not only crop and animal foods raised for family use, but also food obtained from hunting, fishing, and gathering from the wild. About 40 percent of the households in the United States used some home-produced food during a week in summer 1965, the season with the highest rate of use. Nearly all of the farm families, two-thirds of the rural nonfarm, and one-fourth of the urban had some home-produced food during the summer. For farm families, home production contributed one-third or more of the protein, calcium, riboflavin, and Vitamins A and C in the diet during the survey year as well as considerable quantities of other nutrients.

Table 1. Food Expense Per Capita Per Week, U.S. Survey of Consumer Expenditures, July 1972-June 1973

Area	Total food ($)	Index: Urban = 100
All U.S.	10.46	100
Urban	10.71	102
Rural	8.72	83
Inside SMSA	11.10	106
Urban	11.49	110
Rural	8.71	83
Outside SMSA	9.02	86
Urban	9.22	88
Rural	8.72	83

SOURCE: "Additional results from latest Survey of Consumer Expenditures released by BLS," U.S. Department of Labor 75-276, May 15, 1975.

Actual out-of-pocket per person food costs for rural farm families in 1965-66 were approximately 40 percent less than for urban families (Table 2). This difference was narrowed considerably when home-produced food was valued at retail prices or what it would have cost the family had all food been purchased in a retail store. When home-produced foods were valued at average prices paid by families in the same region and degree of urbanization, purchasing the same or similar items, the difference in per meal-equivalent cost of food used at home was about 7 to 8 percent less for rural than for urban families (Table 2).

Producing foods does involve costs, both direct cash outlays and opportunity costs, or the income foregone by committing land, labor, or capital resources to home production. Thus, the actual differential between rural farm and urban families lies somewhere between 7 and 40 percent. In this analysis, it was assumed that prices at the farm level would reflect the costs of production. Recalculating per meal equivalent costs using farm prices to estimate the cost of home-produced food resulted in a rural farm-urban differential of about 20 percent (Table 2). Differences among techniques and among families should be noted because calculations of urban-rural differences in living costs have been based on a variety of methods of valuing home-produced food (and other farm-furnished items) without necessarily being explicit about the assumptions in the system.

Home-produced food contributed slightly over 1-1/2 percent of the average urban family's food bill (at retail prices). Most of this came from gardens and quite a bit from fish and game (Table 3). Farm families obtained one-third of their food (retail value) from home production. Most of this was from animal products -- primarily meat and milk.

Table 2. Cost of Food-at-Home Relationship Using Three Methods of Valuing Home-Produced Food, Household Food Consumption Survey, 1965-66

Item	Index: Urban = 100 Urban	Rural nonfarm	Rural farm
Home-produced food:			
Not valued	100	87	62
Valued at:			
Farm prices	100	90	79
Retail prices	100	93	92

SOURCES: Food Consumption of Households in the U.S., Seasons and Years, 1965-66, Agr. Res. Serv., USDA, March 1972. Farm prices from Agricultural Statistics.

Yet, even among farm families there was great variation in home production. About a fourth used little or no home-produced food during an average week in 1965-66. At the other extreme, about one-twentieth used home produced food with a retail value of over $8 per person per week — about the average of all food purchased and raised for all U.S. families.

Table 3. Source of Home-Produced Food (Retail Value), Household Food Consumption Survey, 1965-66

Item	In Percent: Urban	Rural nonfarm	Rural farm
All home-produced food:	100	100	100
Fish and game	18	10	3
Poultry, eggs	4	7	8
Other meat	10	18	38
Milk and cream	a/	7	17
Total animal	32	42	66
Garden crop	68	58	34

a/ Less than 0.5 percent.

SOURCE: Food Consumption of Households in the U.S., Seasons and Year 1965-66, Agr. Res. Serv., USDA, March 1972.

Following is the percent of U.S. farm households in the U.S. distributed by the value of home-produced food used in a week in 1965-66:

Value of home-produced food used at home per person per week	Percentage of households
Under $1	26
$1 - $3	34
$3 - $5	23
$5 - $8	13
$8 or more	4

Food Consumption of Poor Families, Household Food Consumption Survey, Spring 1965

A special tabulation was made from the data tapes of the spring 1965 portion of the 1965-66 Household Food Consumption Survey. Families were classified by the revised SSA poverty thresholds applied to 1965. The criteria involved income specifications for each family size for farm and nonfarm families. Comparisons were limited to the North Central and Southern regions in order to have enough rural observations.

Poor families used food with a money value (purchased plus non-purchased food valued at retail value) of about $6 per person per week in the South and $7 to $8 in the North Central region (Table 4). Poor farm families were larger than city families and had younger homemakers who were less likely to be working. Fewer of the homemakers were also heads of household. In the South, rural nonfarm families were between farm and city in all of these characteristics. Poor rural nonfarm families in the North Central region were smaller and older than either city or farm. Among both city and farm families, those in the South were larger and older than those in the North Central. Farm families provided over a third of the money value of their diets from home production, which nearly all reported. Seventy percent of rural nonfarm families used home-produced food during the survey week, which accounted for about 20 percent of total food costs. Even urban families, on the average, derived some benefits from home production.

The dollars spent on food were lower on farms in each region and lower in the South than in the North. Food expense for North Central rural nonfarm and urban families was nearly the same. In the South, food expense for rural nonfarm was about midway between farm and urban.

Price per pound for 20 principal food items was explored. There were no consistent differences between poor and nonpoor families in the same locale, between the two regions, or among urbanizations in the same region. For example, all groups of North Central families paid an average of 21 to 22 cents per quart for fresh fluid whole milk; all groups of families in the South paid 25 to 26 cents. Farm families paid a little less than city families for chicken; Southern a little less than North Central in each urbanization group. On the other hand, sugar prices were the same everywhere. Onions were more

Table 4. Poor Families: Characteristics and Money Value of Food, North Central and South, by Urbanization

Item	North Central			South		
	Urban	Rural nonfarm	Rural farm	Urban	Rural nonfarm	Rural farm
Number of poor families	138	77	155	284	214	286
Proportion of total families (percent)	12	19	19	24	35	34
Family size (persons)	3.0	2.7	4.0	3.3	3.8	4.8
Homemaker:						
Median age (years)	50	63	47	57	55	51
Employed outside of home (percent)	20	14	14	24	19	16
Nonwhites (percent)	33	3	1	48	26	33
Female heads (percent)	50	36	6	53	32	7
Money value of food per capita per week ($) a/						
All food	7.12	8.06	8.15	6.32	5.84	5.98
Purchased	6.75	6.60	4.76	5.87	4.67	3.72
Away-from-home	.56	.78	.53	.67	.53	.52
At home	6.19	5.82	4.23	5.20	4.14	3.20
Non-purchased	.37	1.46	3.39	.45	1.17	2.26
Home-produced	.09	1.04	3.25	.13	.80	2.10
Percent Using home-produced food	21	70	98	29	70	93

a/ Home-produced food valued at retail prices.

SOURCE: Household Food Consumption Survey, Spring 1965, special tabulation. Poverty defined by SSA guidelines.

expensive in rural areas than in cities; apples showed the reverse; potatoes were more expensive in cities in the North and for farm families in the South. Price of items as such does not determine differences in expenditure. Families, particularly those on limited budgets, however, might make many of their choices based on relative prices of items available to them.

In summary, the key issue concerning differentials in food expenditures between urban and rural areas was home-produced food. Producing food at home does involve costs, both direct cash outlays and indirect opportunity costs, or the income possibilities foregone by committing land, labor, or capital resources to home production. There is no standard procedure for estimating these costs and, thus, benefits from home production. Similarly, not all farm families participate in home production.

CLOTHING

In this section, two main hypotheses were examined: (1) There is no significant price difference for a given bundle of clothing goods between rural and urban areas and among regions; and (2) given a constant set of prices, the quantity and description of clothing items differ among regions mainly because of climatic conditions. Other studies have addressed the issues of clothing expenditures and budgets. 2, 6/ These studies report little variation in family clothing costs due to variation in residence.

Price Comparisons

Prices collected by the Statistical Reporting Service (SRS), USDA, and by the Bureau of Labor Statistics (BLS), Department of Labor, were compared with the ranges of prices for similar items in catalogs published by major mail-order firms.

Although most BLS and SRS prices fell within the range offered by mail-order houses, a few items fell outside (Table 5). Mail-order catalogs offer many items at lower prices than are listed by either SRS or BLS. It appears that mail-order houses provide an opportunity for all households to purchase the same quality of clothing at comparable prices. However, shopping patterns and preferences might well affect what households actually do.

Preference studies indicate that families in nonmetro areas shop in stores similar to those used by urban families. 8/ Most, especially nonmetro families, shopped in the city. More metro dwellers shopped in suburbs than did nonmetro families. However, metro residents shopped more often in fabric stores, while nonmetro families depended upon department and chain stores.

Other studies indicate that urbanization has little influence on fiber preferences. 5, 8/ Over 50 percent of the mothers in the sample taken by Clayton preferred polyester and cotton blends for all types of clothing. Mothers in all groups liked durable press and easy-care fabrics. Community size and region had little or no effect on fiber preference. 5/

Climatic Variation

BLS adjusts quantity weights to reflect differences in needs caused by climatic conditions. The underlying assumption is that persons in colder areas need more clothing or would wear out heavy clothing faster than persons in warmer areas. Based on the BLS quantity weights, one might expect that certain cities and perhaps specific regions require different clothing than other areas.

Taking the question of differences by region a step further, clothing expenditures in four regions -- Northeast, North Central, West, and South -- are examined using data from the 1960-61 CEX for selected items of heavy outerwear. Average expenditures, adjusted for the number of families of four persons reporting nonzero amounts, are shown for each region and for two low-income groups (Table 6). Average expenditures for the items were highest in the Northeast. The smallest number of families reporting expenditures was in the South. Expenditures were often lowest in the South as well.

When the data were arrayed by family income, the cost advantage in the South, except for selected items, appeared to disappear. Thus, the data do not support totally the hypothesis that heavy outerwear expenditures are higher in the Northeast and North Central regions than in the South. However, the number of families in each income group may be too small to make statistically reliable comparisons.

Table 5. The Range of Prices for Selected Clothing Items: BLS, SRS, and Mail-Order, Adjusted to 1971-2

Item	SRS range	BLS range	Mail-order range (1972)
Men's			
Topcoats	38.70-53.70	20.90-30.10	19.58-49.90
Suit jackets			21.57-54.00
Dress slacks	8.46-9.69	7.74-12.44	8.99-15.95
Suits	62.10-75.60	67.52-90.21	30.56-79.95
Work pants			4.49-9.99
Work shirts			2.99-7.97
Work suits	9.42-11.20	9.29-11.69	
Dress shirts	5.31-6.52	3.35-5.10	4.99-6.99
Sports shirts	4.76-5.86	2.99-4.93	2.99-9.99
Undershorts	1.08-1.22	.99-1.12	.88-1.86
Undershirts	1.02-1.26	.96-1.07	.88-1.75
Hosiery	.49-.56 (cotton)	.81-1.02	.99-2.25 (dress)
Dress shoes	13.00-16.80	7.13-10.94	10.99-26.99
Work shoes	11.80-14.90	14.51-17.21	10.57-23.79
Rubbers	3.78-4.76	4.19-4.93	5.00
Boys'			
Overalls	3.74-4.34	2.87-4.34	3.39-6.99
Sweaters	6.00-7.99	5.53-7.83	3.99-6.99
Jackets	8.37-14.10	12.36-22.05	13.99-23.99
Shoes	8.10-10.50	13.49-16.38	4.99-9.97
Girls'			
Shoes	5.81-8.61	12.30-13.39	4.99-14.00
Dresses	5.01-6.74	5.02-6.89	3.99-6.99
Coats	16.90-25.90	18.48-22.03	15.99-32.97
Socks	.52-.59	.93-1.08	.48-.83
Women's			
Coats	37.20-55.60	40.84-58.93	34.50-57.40
Carcoats	19.80-33.40	19.08-27.49	14.99-52.00
Sweaters	8.60-10.10	4.19-6.11	7.80-10.00
Blouses	4.59-7.14	3.87-5.61	3.99-4.99
Dresses			10.00-26.00
Slips	3.58-4.56	2.42-3.99	1.59-6.50
Girdles	5.00-8.01	7.85-12.48	3.00-14.00
Panties	.84-1.07	.58-.83	.69-1.46
Nightgowns	4.04-5.24	3.96-5.55	2.97-6.00
Dress shoes	8.94-11.70	7.68-10.50	8.99-13.50
Casual shoes	9.84-13.40	10.91-16.07	6.99-13.99

Table 6. Adjusted Average Clothing Expenditures for Selected Outerwear by Region and Income for Family of Four, Rural and Urban

Item	Northeast		North Central		South		West	
	Percentage Reporting	Adjusted Average Expenditure	Percentage Reporting	Adjusted Average Expenditure	Percentage Reporting	Adjusted Average Expenditure	Percentage Reporting	Adjusted Average Expenditure
All Income Groups								
Men & boys, 18+								
Heavy jacket	24	23.63	27	31.29	19	17.26	20	18.15
Boys, 2-15								
Heavy jacket	24	16.08	27	14.37	24	12.50	25	13.32
Women & girls, 18+								
Winter coat	30	61.03	24	40.97	20	51.10	17	52.54
Girls, 2-15								
Winter coat	25	25.52	24	22.54	22	20.05	21	19.48
Children under 2								
Snowsuit	12	12.58	15	12.00	12	11.08	12	9.83
No. of families	2,442		2,526		2,544		1,423	
Income, $3,000 - $3,999								
Men & boys, 18+								
Heavy jacket	22	16.45	22	15.09	19	20.10	19	10.95
Boys 2-15								
Heavy jacket	24	10.50	20	12.60			4	7.25
Women & girls, 18+								
Winter coat	20	47.55	9	47.22	15	31.80		
Girls, 2-15								
Winter coat	30	13.57	18	20.00	20	15.10	20	23.35
Children under 2								
Snowsuit	34	12.88	22	11.50	17	8.24	16	10.56
No. of families	174		243		328		49	
Income, $4,000 - $4,999								
Men & boys, 18+								
Heavy jacket	15	26.33	28	17.25	15	16.27	23	18.65
Boys, 2-15								
Heavy jacket	14	10.93	29	11.10			17	7.49
Women & girls, 18+								
Winter coat	21	46.19	15	51.60			10	37.10
Girls, 2-15								
Winter coat	30	22.00	20	17.75	32	16.88	20	10.60
Children under 2								
Snowsuit	17	8.12	32	10.28	19	10.90	18	8.94
No. of families	308		336		346		155	

SOURCE: Consumer Expenditures and Income, Supplement 3, Part A to BLS Report 237-89-92 (USDA Report CES -- 11 to to 14), 1966

Several factors might explain the results. First, families in the North may not necessarily require more expensive apparel. Heating, air conditioning, frequency of dress changes, layering of garments, and preferences for easy-care fabrics may balance the climatic conditions. Second, the quantity of clothing purchased in a given year presents problems. Does a winter coat wear out in five years or in eight? Do children need new boots every year because the sizes of their feet change? To what extent can they use siblings' discards? Data are not available to estimate such use-depreciation. A third explanation discounts the theory that climatic conditions do not require different apparel. Interarea variations in climate may affect results for a given region. For example, the Western region extends from Washington to California and includes both mountains and deserts. Similarly, the South extends as far north as Appalachia and Kansas where winters are quite cool.

In summary, the available data do not seem to support the assumption of wide variations in clothing costs by region or degree of urbanization. On the other hand, there are too many problems with existing data to state emphatically that differences do not exist. While rural and urban families may have access to the same quality of merchandise through mail-order catalogs, the extent to which they purchase by mail is not known. Data are not available to isolate the effect of residence on clothing needs. And family size, income, preferences, and activities may affect clothing purchases more than urbanization. In addition, it is not possible to treat clothing and other household expenditures separately. Clothing needs often come after food, shelter, or transportation in the set of household priorities.

HOUSING

Many interacting factors contribute to the cost of housing. For example, costs of owning or renting differ, and this difference can be accentuated by both the type and quality of housing and the area in which it is located. Because of the different type, size, and quality of housing occupied by owners and renters, both owned and rented housing were analyzed.

The 1970 Census of Housing tends to support a mixed picture of rural-urban home values (Table 7). Median values differ little between rural and smaller urban places outside urbanized areas (2,500 to 50,000 population) except in the Northeast (New England and Middle Atlantic) where rural values are higher. In fact, rural home values in the Northeast are higher than home values in some of the larger SMSA's. Home values in SMSA's are higher than rural values in all other regions.

These value differences may reflect building lot values. Burnham and Jones found no substantial difference in remodeling and construction costs among economic or geographic regions in Ohio in 1969. 4/ However, land values were found to vary drastically within areas of Ohio, but Burnham and Jones did not speculate as to the reason.

Some of the value differences between rural areas and SMSA's may be due to the different age mix of homes. The housing value ratio of rural to outside central cities (mainly suburbs of SMSA's) for the U.S. is greater for

Table 7. Median Values of Total Housing Units Having all Plumbing Facilities for Rural and Urban Places in Each Census Region and for Units Built from 1965-1970 (Index: Rural nonfarm = 100)

Region and size of place	All housing		Housing built from 1965-1970	
	Median value ($) a/	Index	Median value ($) a/	Index
United States				
Outside SMSA				
Rural nonfarm	14,100	100	21,900	100
2,500 to 50,000 pop.	13,900	99	22,800	104
Inside SMSA				
Central cities	16,500	117	26,000	119
Outside central cities	22,100	157	30,000	137
New England				
Outside SMSA				
Rural nonfarm	21,000	100	27,600	100
2,500 to 50,000 pop.	17,300	82	25,800	93
Inside SMSA				
Central cities	19,000	90	24,800	90
Outside central cities	23,200	110	30,600	111
Middle Atlantic				
Outside SMSA				
Rural nonfarm	16,600	100	26,700	100
2,500 to 50,000 pop.	14,000	84	26,100	98
Inside SMSA				
Central cities	14,800	89	27,600	103
Outside central cities	22,700	137	32,500	122
East North Central				
Outside SMSA				
Rural nonfarm	15,100	100	24,100	100
2,500 to 50,000 pop.		93	25,300	105
Inside SMSA				
Central cities	16,500	109	27,500	114
Outside central cities	22,400	148	32,400	134
West North Central				
Outside SMSA				
Rural nonfarm	10,300	100	20,200	100
2,500 to 50,000 pop.	13,100	127	23,100	114
Inside SMSA				
Central cities	15,600	151	25,000	124
Outside central cities	19,800	192	28,800	143
South Atlantic				
Outside SMSA				
Rural nonfarm	13,300	100	19,900	100
2,500 to 50,000 pop.	14,100	106	22,600	114
Inside SMSA				
Central cities	14,600	110	22,800	115
Outside central cities	20,100	151	28,300	142

Table 7. Continued

(Index: Rural nonfarm = 100)

Region and size of place	All housing		Housing built from 1965-1970	
	Median value ($) a/	Index	Median value ($) a/	Index
East South Central				
Outside SMSA				
Rural nonfarm	11,100	100	16,100	100
2,500 to 50,000 pop.	12,800	115	19,100	119
Inside SMSA				
Central cities	14,400	127	22,500	140
Outside central cities	16,600	150	22,700	141
West South Central				
Outside SMSA				
Rural nonfarm	9,500	100	16,000	100
2,500 to 50,000 pop.	10,700	113	19,000	119
Inside SMSA				
Central cities	19,200	202	24,200	151
Outside central cities	16,600	175	22,000	138
Mountain				
Outside SMSA				
Rural nonfarm	10,000	100	22,600	100
2,500 to 50,000 pop.	14,000	140	21,800	96
Inside SMSA				
Central cities	17,000	170	24,500	108
Outside central cities	19,600	196	26,100	115
Pacific				
Outside SMSA				
Rural nonfarm	18,100	100	26,000	100
2,500 to 50,000	17,700	98	25,600	98
Inside SMSA				
Central cities	22,300	123	31,900	123
Outside central cities	23,800	131	32,500	125

a/ Rounded to nearest $100.

SOURCE: Special tabulations from the One-In-A-Hundred Neighborhood Characteristics Sample, Census of Population and Housing, 1970, Bureau of Census.

all housing than when only housing built from 1965-70 is considered. This same relationship exists in all regions except the New England region where the ratio is about equal for the two time periods.

Median gross rents follow the same pattern as median values (Table 8). Rents, like values, are higher in urbanized areas, tend to be about the same in rural and the smaller places outside urbanized areas, are lower in the South, and higer in the Northeast. In the New England, Middle Atlantic, and East North Central regions, rents are higher in rural areas than in places of 2,500 to 50,000 population. The opposite is true in the remaining regions.

Large variations in median rent exist between rural and urban places or between geographic regions. There is also a large rent overlap that can be measured by an index of integration which measures the sum of the commonalities expressed in terms of percentage shared in each class interval of two frequency distributions. 32/ The index of integration can be derived by summing for each class interval the lowest percentage for either of the two distributions. For example, if the frequency distribution of housing rents in a rural place was superimposed on the frequency distribution of housing rents in an urban place, the index of integration would measure the area common to both distributions. The greater the degree of overlap, the greater the index of integration. An index of 1.00 would be the measure of a perfect overlap of the two frequency distributions, while an index of zero would be a measure of no overlap.

The distribution overlap is great when rural places are compared to places of 2,500 to 50,000 population and, to a lesser extent, central cities in the same region (Table 9). This tends to tone down the differences in the median rent as it shows there is a very large commonality of rents in rural places and places of 2,500 to 50,000 population, and rural places and central cities within a region.

There is less rent distribution overlap when the lowest rent region for each of the four size places is compared to the same size of place in each of the other regions (Table 10).

The data in Tables 9 and 10 imply that there is more variation between regions in any size of place category than between size of place within regions. These data also imply a large number of common rents in all regions and all sizes of place .

Data collected in 1972 show about 70 percent of the total cost for housing maintenance and repair and improvements for one-unit home owners was spent on improvements and 30 percent on maintenance and repair. About half of all maintenance and repair costs was spent on painting and papering. Expenditures for improvements and upkeep are generally related to the value of the property. The higher the property value, the greater the expenditure per property.

Home owners in the South report the lowest expenditures for maintenance and repairs and construction improvement, while the North Central tends to be the highest (Table 11). With the exception of central cities in the

Table 8. Median Rents of Total Housing Units Having all Plumbing Facilities for Rural and Urban Places in Each Census Region and for Units from 1965-1970 (Index: Rural nonfarm = 100)

Region and size of place	All housing		Housing built from 1965-1970	
	Median rent ($)	Index	Median rent ($)	Index
United States				
Outside SMSA				
Rural nonfarm	91	100	123	100
2,500 to 50,000 pop.	91	100	132	107
Inside SMSA				
Central cities	107	118	149	121
Outside central cities	135	148	167	136
New England				
Outside SMSA				
Rural nonfarm	115	100	156	100
2,500 to 50,000 pop.	99	86	144	92
Inside SMSA				
Central cities	110	96	151	97
Outside central cities	130	113	168	108
Middle Atlantic				
Outside SMSA				
Rural nonfarm	101	100	152	100
2,500 to 50,000 pop.	91	90	147	97
Inside SMSA				
Central cities	110	109	152	100
Outside central cities	132	131	170	112
East North Central				
Outside SMSA				
Rural nonfarm	106	100	140	100
2,500 to 50,000 pop.	98	93	142	101
Inside SMSA				
Central cities	120	113	151	108
Outside central cities	143	135	174	124
West North Central				
Outside SMSA				
Rural nonfarm	84	100	102	100
2,500 to 50,000 pop.	91	108	132	129
Inside SMSA				
Central cities	100	119	150	147
Outside central cities	145	173	169	166
South Atlantic				
Outside SMSA				
Rural nonfarm	86	100	120	100
2,500 to 50,000 pop.	87	101	128	107
Inside SMSA				
Central cities	103	120	142	118
Outside central cities	141	164	165	138

Table 8. Continued

(Index: Rural nonfarm = 100)

Region and size of place	All housing		Housing built from 1965-1970	
	Median rent ($)	Index	Median rent ($)	Index
East South Central				
Outside SMSA				
Rural nonfarm	74	100	91	100
2,500 to 50,000 pop.	75	101	96	105
Inside SMSA				
Central cities	87	118	128	141
Outside central cities	98	132	142	156
West South Central				
Outside SMSA				
Rural nonfarm	70	100	85	100
2,500 to 50,000 pop.	75	107	109	128
Inside SMSA				
Central cities	96	137	148	174
Outside central cities	121	173	151	178
Mountain				
Outside SMSA				
Rural nonfarm	88	100	108	100
2,500 to 50,000 pop.	88	100	124	115
Inside SMSA				
Central cities	110	125	145	134
Outside central cities	130	148	151	140
Pacific				
Outside SMSA				
Rural nonfarm	98	100	132	100
2,500 to 50,000 pop.	110	112	140	106
Inside SMSA				
Central cities	120	122	156	118
Outside central cities	135	138	163	123

SOURCE: Special tabulations from the One-In-A-Hundred Neighborhood Characteristics Sample, Census of Population and Housing, 1970, Bureau of Census.

Table 9. Rent Distribution Overlap (Index of Integration) a/ of Rural Areas in Each Region with Places of Selected Population Size in Each Region, 1970

Region	Size of place		
	Outside SMSA	SMSA	
	2,500 to 50,000 population	Central cities	Outside central cities
United States	.984	.854	.647
New England	.838	.937	.872
Middle Atlantic	.896	.941	.765
E. N. Central	.916	.946	.674
W. N. Central	.914	.819	.498
S. Atlantic	.966	.824	.548
E. S. Central	.962	.831	.727
W. S. Central	.916	.719	.512
Mountain	.923	.797	.627
Pacific	.890	.814	.697

a/ The index of integration measures the degree of overlap of two frequency distributions. An index of 1.000 indicates that two distributions are equal.

SOURCE: Special tabulations from the One-In-A-Hundred Neighborhood Characteristics Sample, Census of Population and Housing, 1970, Bureau of Census.

Table 10. Rent Distribution Overlap (Index of Integration) a/ of Each Lowest Rent Size of Place With the Same Size of Place in Other Regions, 1970

Region	Size of place			
	Outside SMSA		SMSA	
	Rural nonfarm	2,500 to 50,000 pop.	Central cities	Outside central cities
New England	.546	.712	.772	.744
Middle Atlantic	.657	.789	.811	.744
E. N. Central	.603	.730	.755	.658
W. N. Central	.823	.807	.855	.625
South Atlantic	.805	.863	.833	.668
E. S. Central	.950	.934	b/	b/
W. S. Central	b/	b/	.907	.810
Mountain	.793	.841	.793	.738
Pacific	.678	.668	.708	.706

a/ The index of integration measures the degree of overlap of two frequency distributions. An index of 1.000 indicates that two distributions are equal.

b/ Lowest rent region in this size of place.

Table 11. Average Expenditure for Maintenance and Repairs, and Construction Improvements for 1-Unit Owner Occupied Residential Properties; by Region and Location of Property: 1969 to 1972

Region and Location	Average expenditures per property (in dollars)				Index of average expenditures outside SMSA = 100			
	1972	1971	1970	1969	1972	1971	1970	1969
United States								
Total	298	279	265	247	134	107	120	127
Inside SMSA's	346	291	292	280	155	111	133	144
Inside central cities	300	257	258	265	135	98	117	136
Outside central cities	370	310	313	290	166	119	142	149
Outside SMSA's	223	261	220	195	100	100	100	100
Northeast								
Total	382	295	329	288	118	106	113	121
Inside SMSA's	407	303	344	309	126	109	119	130
Inside central cities	330	251	279	203	102	91	96	85
Outside central cities	435	326	371	353	134	118	128	148
Outside SMSA's	324	277	290	238	100	100	100	100
North Central								
Total	267	303	263	250	141	102	159	128
Inside SMSA's	327	307	286	291	172	104	125	149
Inside central cities	330	251	244	269	136	85	107	138
Outside central cities	364	338	311	304	192	114	136	156
Outside SMSA's	190	296	228	195	100	100	100	100
South								
Total	250	237	216	193	129	105	116	111
Inside SMSA's	305	249	247	211	157	111	133	121
Inside central cities	319	265	245	212	164	118	132	122
Outside central cities	294	236	248	211	152	105	133	121
Outside SMSA's	194	225	186	174	100	100	100	100
West								
Total	334	291	275	294	118	116	133	139
Inside SMSA's	348	304	295	320	123	122	143	151
Inside central cities	302	259	276	419	106	104	134	198
Outside central cities	369	326	305	263	130	130	148	124
Outside SMSA's	284	250	206	212	100	100	100	100

SOURCE: U.S. Department of Commerce, 1972 Annual Report — Part 2. One Housing Unit Owner Occupied Properties, Residential Alterations and Repairs, c50-72A, November 1973.

Northeast, the average expenditure was less outside SMSA's. Presumably, these same trends would apply to rental units.

The U.S. Department of Labor published data on annual housing costs for major metropolitan centers and nonmetropolitan urban areas for the four major census regions (Table 12). In addition to rent, these household operating costs include fuel, water, refuse disposal, and insurance. For a low-budget family, housing costs were generally lower in the South. Housing costs between metro and nonmetro urban areas were inconclusive, metro costs ranging both higher and lower than the nonmetro urban cost in each region.

There are other costs of home occupancy, particularly for home owners. The ability to afford home ownership is significantly affected by the conditions under which financing can be obtained. In more rural areas, mortgage interest rates tend to be higher and time to maturity shorter than is the case in urban areas (Tables 13 and 14). Both of these factors act to increase the money needed for home owning in rural areas.

The cost of utilities, particularly for home heating, may also differ by a rural-urban division. Rural households heat more often with LP-gas, a high cost fuel, and less often with natural gas, a lower cost fuel. However, this also reflects regional variations, as the LP use is concentrated in the Southeast where BTU consumption for home heating is below the national average.

In summary, housing costs differ very little between rural areas and places from 2,500 to 50,000 population. Within some regions, rural housing is more costly than that in the central city area. However, between regions of the country, housing costs tend to be lower in the South. Some of this difference is probably attributable to differences in the types of homes. Southern homes normally do not have basements and central heating systems. Adjustments for differences in these costs would probably make the housing costs quite comparable. In general, housing cost differences if used should vary by region and by metro and nonmetro areas and not by a rural-urban dichotomy.

TRANSPORTATION

Rural households depend more heavily on private vehicles to achieve mobility than do urban households, due primarily to the lack of public transportation. Preliminary results from the 1973 farm-operator family living survey showed that the largest family expenditure was for transportation, amounting to 29 percent of all expenditures for family living. 21/ Low population density in rural areas may make some forms of public transportation economically infeasible. Data from a 1969-70 survey by the Department of Transportation supports this contention. This study used a residential classification, unincorporated areas and incorporated places, that does not exactly conform to the rural-urban designation. The report showed that percentage of employed persons having no public transportation as:

Table 12. Annual Housing Costs of a Low Budget 4-Person Family Autumn 1973

Area	Total	Shelter d/ (renter costs)	House furnishings & operations
Urban United States	$1,627	$1,261	$366
Metropolitan areas b/	1,653	1,289	364
Nonmetropolitan areas c/	1,509	1,136	373
Northeast:			
Boston, Mass.	1,955	1,573	382
Buffalo, N.Y.	1,576	1,204	372
Hartford, Conn.	1,967	1,600	367
Lancaster, Pa.	1,543	1,195	348
New York-Northeastern N.J.	1,697	1,317	380
Philadelphia, Pa.-N.J.	1,482	1,131	351
Pittsburgh, Pa.	1,461	1,109	352
Portland, Maine	1,810	1,415	395
Nonmetropolitan areas c/	1,527	1,171	356
North Central:			
Cedar Rapids, Iowa	1,598	1,242	356
Champaign-Urbana, Ill.	1,890	1,517	373
Chicago, Ill.-Northwestern Ind.	1,751	1,394	357
Cincinnati, Ohio-Ky.-Ind.	1,403	1,071	332
Cleveland, Ohio	1,532	1,179	353
Dayton, Ohio	1,482	1,125	357
Detroit, Mich.	1,472	1,146	326
Green Bay, Wis.	1,587	1,201	386
Indianapolis, Ind.	1,608	1,250	358
Kansas City, Mo.-Kans.	1,503	1,143	360
Milwaukee, Wis.	1,682	1,332	350
Minneapolis-St. Paul, Minn.	1,609	1,260	349
St. Louis, Mo.-Ill.	1,496	1,145	351
Wichita, Kans.	1,542	1,181	361
Nonmetropolitan areas c/	1,635	1,265	370
South:			
Atlanta, Ga.	1,522	1,134	388
Austin, Tex.	1,349	974	375
Baltimore, Md.	1,749	1,357	392
Baton Rouge, La.	1,368	1,015	353
Dallas, Tex.	1,423	1,067	356
Durham, N.C.	1,628	1,250	378
Houston, Tex.	1,392	1,011	381
Nashville, Tenn.	1,495	1,111	384
Orlando, Fla.	1,793	1,417	376
Washington, D.C.-Md.-Va.	1,840	1,480	360
Nonmetropolitan areas c/	1,414	1,031	383
West:			
Bakersfield, Calif.	1,496	1,140	356
Denver, Colo.	1,493	1,126	367
Los Angeles-Long Beach, Calif.	1,785	1,429	356
San Diego, Calif.	1,696	1,367	329
San Francisco-Oakland, Calif.	1,980	1,609	371
Seattle-Everett, Wash.	1,726	1,340	386
Honolulu, Hawaii	2,298	1,871	427
Nonmetropolitan areas c/	1,581	1,216	365

a/ The family consists of an employed husband, age 38, a wife not employed outside the home, an 8-year-old girl, and a 13-year-old boy and lives in a rented dwelling.

b/ As defined in 1960-61. For a detailed description of current and previous geographical boundaries, see the 1967 edition of Standard Metropolitan Statistical Areas, prepared by the Office of Management and Budget.

c/ Places with population of 2,500 to 50,000.

d/ Renter costs include average contract rent plus the cost of required amounts amounts of heating fuel, gas, electricity, water, specified equipment, and insurance on household contents. Homeowner costs include interest and principal payments plus taxes; insurance on house and contents; water, refuse disposal, heating fuel, gas, electricity, and specified equipment; and home repair and maintenance costs.

SOURCE: Autumn 1973 Urban Family Budgets and Comparative Indexes for Selected Urban Areas, Bureau of Labor Statistics, U.S. Department of Labor. 74-304

Table 13. Distribution of First Mortgage Loans on One-unit, Home Owner Properties by Interest Rates Paid and by Location of Properties, 1971

Interest rate	Location of properties		
	SMSA's	Non-SMSA's	Less than 10,000 and rural in non-SMSA's
	Percent:		
Less than 6 percent	44.7	27.1	24.6
6 percent	21.0	26.9	27.0
More than 6 percent	34.3	46.0	48.4

SOURCE: U.S. Census of Housing, Residential Finance, Vol. V, 1970.

Table 14. Distribution of First Mortgage Loans on One-unit, Home Owner Properties by Years-to-Maturity of Loans and by Location of Properties, 1971

Years-to-maturity of first mortgages	Location of properties		
	SMSA's	Non-SMSA's	Less than 10,000 and rural in non-SMSA's
	Percent:		
Less than 12 years	7.8	24.5	28.1
13 to 22 years	26.8	36.9	36.5
23 years or more	63.5	36.4	32.8
No stated term	1.9	2.2	2.6
	Years:		
Median	25.5	20.3	19.4

SOURCE: U.S. Census of Housing, Residential Finance, Vol. V, 1970.

Unincorporated areas	71.3 percent
Incorporated places	
Under 5,000	87.5 percent
5,000-24,999	63.8 percent
25,000-49,999	46.9 percent
50,000-99,999	34.8 percent
100,000-999,999	20.1 percent
1,000,000 and over	5.3 percent

Employed persons, excluding persons who work at home or at no fixed address, were asked about the availability of public transportation to and from work. Over 70 percent of the workers living in unincorporated areas reported no public transportation available. 31/ As population size increased, the percentage without public transportation declined to a low of slightly over 5 percent in large cities. The same result would most likely hold for non-work trips.

Thus, access to a private vehicle is extremely important for those living outside major cities. A higher proportion of nonmetropolitan residents own private vehicles particularly relative to central city residents (Table 15). This is particularly true for lower income households, those reporting less than $5,000 income in 1972. The incidence of multiple-vehicle ownership is also considerably higher in nonmetropolitan areas.

Table 15. Incidence of Households Owning Cars and Light Trucks by Residence and Income, July 1972

Income class	Metropolitan areas			Nonmetropolitan areas
	Total	Central cities	Suburban ring	
	Percent owning one or more vehicles			
Less than $5,000	48	39	62	68
$5,000-9,999	85	77	92	96
$10,000-14,999	95	91	97	98
$15,000 and over	96	92	98	98
	Percent owning two or more vehicles			
Less than $5,000	9	6	14	21
$5,000-9,999	32	25	39	52
$10,000-14,999	54	42	61	70
$15,000 or more	66	58	70	76

SOURCE: U.S. Bureau of the Census, Current Population Reports, "Consumer Buying Indicators, Household Ownership of Cars and Light Trucks: July 1972," Series P-65, No. 44, Government Printing Office, Washington, D.C., February 1973.

The limited data available on the characteristics of vehicles owned show slight differences between places of residence, particularly for the lower income groups. The one exception to this general rule is the probability of light truck ownership. Sixteen percent of nonmetropolitan households with incomes under $5,000 in July 1972 owned light trucks compared with only 2.1 percent for central city residents and 7.1 percent for suburbanites. A similar pattern existed for those households reporting income of $5,000 to $9,999 in 1972. 22, Table 1/

There appears to be little difference between metro and nonmetro low-income households in the average age of cars owned. Households outside metropolitan areas with incomes under $5,000 owning one car reported the average age to be 6.0 years, about the same as similar households in central cities. 22, Table 5/ On the average, these same nonmetro families own the auto about 0.4 of a year longer than their central city counterparts. Primary data on acquisition costs of vehicles between urban and rural areas are almost nonexistent. However, one would probably find as much variability in acquisition costs within a specific residence category as between urban and rural areas.

The average number of annual miles driven by rural households greatly exceeds that of urban residents (Table 16). With the exception of households in incorporated places under 5,000 in population, rural residents drove almost 50 percent more miles in 1969-70 than did their urban counterparts.

Although rural households operate a motor vehicle more and for longer distances than do urban people, there are few hard data showing relative vehicle operating costs. Those few studies that have been undertaken suggest that there is little difference in vehicle operating costs by residence. 7, 30/

Data from the 1960-61 Consumer Expenditure Survey partly confirm the above conclusion with one exception discussed below (Table 17). There was little difference in total transportation costs between urban and rural nonfarm families outside SMSA's. Inside SMSA's transportation cost rural nonfarm families 11 percent more than urban families. Transportation costs were about 10 percent less for farm families than urban families inside and outside SMSA's. Transportation expenditures other than automobile costs were substantially less in rural than in urban areas, supporting the 1969 survey results showing a lack of rural public transportation. Location relative to an SMSA appears to be a bigger factor in transportation costs than urban-rural residency. Regardless of urbanization, transportation costs were about 20 percent less outside SMSA's.

Total transportation costs appear to be higher in rural areas for low income families than for similar families in urban areas (Table 18). Rural farm families with income under $3,000 in 1960 spent almost twice as much on transportation as did their urban counterparts. Rural nonfarm families spent over two-thirds more. This result suggests that lower transportation costs in rural areas, to the extent they even exist, may well be a characteristic of middle and upper income classes.

In summary, it appears the biggest difference between rural and urban families is the lack of public transportation in rural communities. This lack of public transportation is extremely critical for low-income rural residents as they must own their own vehicle or depend on relatives and friends to supply transportation. Lack of a private vehicle would limit their ability to shop and to obtain services at competitive prices within the community or region and to seek employment opportunities.

Table 16. Annual Trips, Vehicle-Miles, and Average Trip Length Per Household According to Residence and Purpose

Purpose	Unincorporated areas	Incorporated places						All places and areas
		Under 5,000	5,000-24,000	25,000-49,000	50,000-99,000	100,000-999,999	One million and over	
	Annual trips							
Earning-a-living	561	401	661	511	481	438	324	506
Family business	493	217	601	480	430	369	181	432
Social and recreational	336	278	421	343	299	286	125	312
Other	178	80	187	145	134	133	70	296
Total all purposes	1,568	1,056	1,870	1,479	1,344	1,226	700	1,396
Average daily trips	4.3	2.9	5.1	4.1	3.7	3.4	1.9	3.8
	Vehicle miles							
Earning-a-living	6,438	4,124	6,180	4,682	4,275	3,801	4,155	5,166
Family business	3,316	2,271	2,675	2,177	2,087	1,649	1,027	2,401
Social and recreational	4,455	3,946	5,086	4,202	4,016	3,426	2,580	4,094
Other	1,178	635	755	540	462	523	448	762
Total all purposes	15,387	10,976	14,696	11,601	10,840	9,399	8,210	12,423
Average daily vehicle-miles	42.1	30.1	40.2	31.8	29.7	25.8	22.5	34.0

SOURCE: U.S. Department of Transportation, National Personal Transportation Study, Report No. 7, pp. 16-17 and Report No. 10, pp. 16.

Table 17. Annual Transportation Expenditures by All Families in United States, by Urbanization and Location Inside and Outside Metropolitan Areas, 1960-61

Urbanization	Transportation expenditure ($)		
	Total	Automobile	Other
Total U.S.			
Total	770	693	77
Urban	793	700	93
Rural nonfarm	737	700	37
Rural farm	613	588	25
Inside SMSA's			
Total	830	731	99
Urban	822	718	104
Rural nonfarm	920	858	62
Rural farm	736	720	16
Outside SMSA's			
Total	665	626	39
Urban	683	629	54
Rural nonfarm	671	643	28
Rural farm	600	574	26

SOURCE: Murphy, Kathryn R., "Spending and Saving in Urban and Rural Areas," Monthly Labor Review 88(10): 1169-1176, October 1965.

Table 18. Annual Transportation Expenditures by All Families in United States, by Urbanization and Money Income After Taxes, 1960-61

Income and urbanization	Transportation expenditure ($)		
	Total	Automobile	Other
Under $3,000			
Total	200	168	32
Urban	155	111	44
Rural nonfarm	259	243	16
Rural farm	304	292	12
$3,000 to 7,499			
Total	773	710	63
Urban	756	681	75
Rural nonfarm	847	816	31
Rural farm	723	695	28
$7,500 and over			
Total	1,403	1,243	160
Urban	1,413	1,237	176
Rural nonfarm	1,432	1,325	107
Rural farm	1,136	1,082	54

SOURCE: Murphy, Kathryn R., "Spending and Saving in Urban and Rural Areas," Monthly Labor Review 88(10): 1169-1176. October 1965.

COMMUNITY SERVICES

Lower tax rates, particularly with respect to property and sales taxes, are one advantage often advanced for living outside metro areas, and recent Census Bureau data support this contention (Table 19). Per capita total revenue collected by local governments outside SMSA's from own sources in 1971-72 was less than 60 percent of SMSA per capita revenues. Per capita property tax, one of the more regressive taxes, was 36 percent less outside SMSA's. However, property taxes are a more important source of local government revenue outside metro areas, and to the extent a higher proportion of the rural poor are home owners, the rural poor have a relatively higher tax burden than their SMSA counterparts.

Associated with lower taxes outside SMSA's are low per capita expenditures for services, with the exception of highway maintenance (Table 19). Per capita expenditures for education and hospitals outside SMSA's are about 80 percent of similar SMSA expenditures. The other nonmetro per capita expenditures in Table 19 are 40 percent or less of their metro counterparts.

Table 19. Per Capita Local Government Finance Inside and Outside SMSA's, 1971-72 ($)

Selected Item	U.S. ($)	Inside SMSA's ($)	Outside SMSA's ($)
Revenue from own sources			
Taxes, total	244.71	279.09	162.57
Property	204.78	229.09	146.71
Sales and gross receipts	21.00	26.27	8.40
Utility revenue	37.89	41.50	29.26
Direct expenditure for			
Education	239.42	248.64	217.40
Highways	30.87	28.12	37.45
Public welfare	43.64	53.97	18.96
Hospitals	27.28	28.86	23.49
Health	7.23	8.76	3.58
Police protection	25.12	30.67	11.88
Fire protection	12.69	15.90	5.01
Sewerage	16.04	19.40	8.00
Parks and recreation	11.41	14.59	3.79

SOURCE: U.S. Bureau of the Census, Census of Governments, 1972, Vol. 5, Local Governments in Metropolitan Areas, U.S. Government Printing Office, Washington, D.C., 1974.

The costs shown in Table 19 reflect direct costs to local governments. They do not take into account variations in the quality of services or all costs to the community. For example, medical services provided in rural communities, discussed in detail in the next section, are inferior relative to those in more populated areas. Costs for fire protection do not include estimates of the higher cost of fire insurance to rural residents, due to less reliable fire protection, nor the opportunity costs of the volunteer time given to fire protection in smaller towns and rural areas.

One recent study analyzed the social costs involved in controlling crime, air pollution and fire protection, the cost of hospital and education services, and the cost of providing utility services. 12/ The social costs of controlling crime were higher in smaller cities than medium-size cities, with the least cost city size being about 375,000 people. Social costs increased again as cities became larger. When private costs of fire protection and private outlays for fire insurance were added to direct public outlays, the cost of fire protection was much higher in smaller communities than in cities of 1,000,000 or more. Considerable economies of size exist in hospital services until city size reaches 100,000 or more. These results support the contention that the real cost of services is much higher in rural America than direct outlays might suggest.

It is generally recognized that many Federal welfare programs, particularly those designed to aid the poor, are not as readily available in rural areas. For example, this special problem of horizontal equity is particularly acute for housing subsidies and manpower training programs. 17/ Generally, benefit levels are lower in rural areas, in the South, and in areas having higher proportions of minority groups. 16/ This situation further complicates the service delivery system in many rural areas. In summary, direct per capita costs of community services are less outside SMSA's, but direct costs do not take into account variations in quantity and quality of the service available.

MEDICAL SERVICES

Health care, or rather, lack of it, is much more critical in rural areas. The shortage of physicians is more acute; patients must travel longer distances to obtain health services, emergency health services are more deficient, work-related injury rates are higher, and a comprehensive approach to health care delivery is less likely to be present. 11, p. 1/

The patient-to-physician ratio is higher in nonmetro areas in general, and in rural areas in particular, than in metro areas (Table 20). There is only one non-Federal physician for every 2,074 people in nonmetro areas of less than 10,000 people compared with 421 people per physician in our largest cities. In addition, the composition of physician services provided is considerably different in nonmetro areas (Table 21). Though the number of general practitioners per 100,000 people is higher in rural areas, specialists appear to be predominantly located in metropolitan areas.

Table 20. Non-Federal Physician-Population Ratios by Size of County, 1972

County classification	Population per non-Federal physician
Total a/	643
Nonmetropolitan	
Less than 10,000 residents	2,074
10,000-24,999 residents	1,776
25,000-49,999 residents	1,282
50,000 or more residents	952
Metropolitan	
Less than 50,000 residents	974
50,000-499,999 residents	692
500,000-999,999 residents	606
1,000,000-4,999,999 residents	497
5,000,000 or more residents	421

a/ Excludes Puerto Rico and possessions.

SOURCE: Distribution of the Physicians in the U.S., 1972, Regional, State, County, Center for Health Services Research and Development, American Medical Association, Table F.

Table 21. Distribution of Non-Federal Physicians per 100,000 Population by SMSA and Non-SMSA Areas, 1972

Non-Federal physicians	Per 100,000 population	
	SMSA	Non-SMSA
Patient care	151.8	64.4
Office-based practice		
General practice	21.9	27.6
Special practice	86.7	30.4
Hospital-based practice	43.2	6.4
Other professional activity a/	14.9	2.5

a/ Includes medical teaching, administration, research and other health-care related work.

SOURCE: Distribution of the Physicians in the U.S., 1972, Regional, State, County, Center for Health Services Research and Development, American Medical Association, Table F.

A similar residential discrepancy also shows up for other selected health personnel. Nonmetro areas reported 223 registered nurses per 100,000 population in 1966 compared with 332 for metro. There were only 35 dentists per 100,000 nonmetro persons in 1967 compared with almost 62 in metro areas.

Recent analysis of the change in the city-size distribution of professional medical personnel shows some trend toward decentralization over the past 20 years in the Upper Midwest. 3/ A general suburbanization of physicians and dentists was suggested in the data as well as increases in medical personnel located in nonmetropolitan places of 25,000 or more population. This indicates that suburban and nonmetro cities are, to a greater extent, becoming the providers of special medical care for the rural population.

Although medical care is available to rural people, the above data suggest two important implications. First, rural people must travel longer distances to obtain medical services. Secondly, medical personnel available tend to be less specialized, with particularly heavy case-loads.

Although there are fewer trained medical personnel outside major cities, there appears to be a larger supply of nonmetro hospital beds (Table 22). Many of these beds do not meet Hill Burton (construction) standards. It does not appear that rural areas need more hospital beds relative to large cities, but there may be some need for modernization and consolidation.

Table 22. Hospital Beds Per 100,000 Population, by Metropolitan and Nonmetropolitan Areas, 1970

Type of hospital	Beds per 100,000 people	
	Metropolitan areas	Nonmetro-politan areas
Total	719.2	977.3
Federal	76.9	80.4
Non-Federal	642.4	897.0
Psychiatric	207.2	370.6
Tuberculosis	9.2	9.8
Other long-term	31.8	21.9
Community a/	394.1	494.7

a/ Short-term general and other special hospitals.

SOURCE: Matthews, Tresa H., Health Services In Rural America, USDA, Agr. Inf. Bul. No. 362, April 1974.

Recent data imply that there may be a greater relative need for medical care in rural areas. A 1968-69 DHEW survey showed nonmetro nonfarm residents as having 255.8 persons injured per 1,000 population, 8.6 persons more than reported in metro areas. 11/ "Persons injured" was defined as persons whose injuries either required medical attention or caused a reduction in usual activities for at least one day; minor injuries not meeting these criteria were excluded in the survey. Farm residents reported the lowest incidence, 225.2 injuries per 1,000 population. A farmer's loss of work may not be directly comparable with a nonfarmer's loss of work because the farmer's work schedule is much more flexible. Work-related injuries are appreciably higher outside major cities. For example, 35.9 male blue-collar workers, 17-64 years old, per 100 employed persons were injured while at work outside SMSA's in fiscal 1967 compared with 28.5 per 100 employed persons in SMSA's. 11/ Nonmetro workers reported 27 percent more days of restricted activity and 20 percent more days lost from work than their metro counterparts. They also reported 11 percent more bed disability days than did metro male blue-collar workers.

A 1970 employment survey made by the Bureau of the Census obtained extensive socioeconomic information on the employment-related problems of disadvantaged persons in seven predominantly rural areas and in 60 urban areas. 24/ The results of this census survey suggest that there may be little difference in health problems as a barrier to employment between poor rural areas and poor sections of urban areas. Further research of this nature is needed to determine whether or not the same results hold for health in general between poor rural and urban residents.

One important factor in health care costs is the use and availability of hospital and surgical insurance coverage. The rate of coverage in 1968 for both types of insurance was higher in urban areas than in rural areas, with farm persons having the lowest rate of coverage of either type of insurance. 11/ Over 81 percent of SMSA persons under 65 were covered by hospital insurance, 7 percentage points higher than nonmetro nonfarm persons and 19 percentage points higher than nonmetro farm people. A similar situation exists for surgical insurance with 80 percent of SMSA, 73 percent of nonmetro nonfarm, and 60 percent of nonmetro farm people reporting coverage.

VARIATIONS IN FAMILY LIVING COSTS: BLS-USDA COMPARISON

The Bureau of Labor Statistics (BLS), U.S. Department of Labor, and the Statistical Reporting Service (SRS), U.S. Department of Agriculture, periodically collect price information for items included in family budgets. The purpose of BLS's effort is to maintain the Consumer Price Index (CPI), an index of prices paid by urban wage earners and clerical workers. As a separate but related activity, BLS also publishes annual budgets representing three standards of living for an urban family of four. Data collected by SRS are for a similar purpose, to maintain the index of prices paid by farmers for family living. Both agencies collect separate data and have developed their own weighting system for their respective indexes. The choice of the weighting system could be relatively important in determining living costs if observed variations in price fluctuate among items. For example, item X may cost more in urban areas than in rural while there may be no difference in the price of item Y. Weighting system A may give more weight to item X while the opposite is true for weighting system B. Analysis of family living costs using weighting system A may then show more residential difference than would a similar analysis using system B. Although the importance of the weighting system is recognized, that topic was not explored in the following discussion.

It has been suggested that the family budgets developed by BLS provide a basis for a poverty measure. Technical Paper IV in this series addresses this specific issue. This section explores the feasibility of developing rural family budgets by substituting rural price data collected by SRS into the BLS family budget procedure. If this could be done, differences in living costs between rural and urban areas could be examined. Because the quantity weights developed by BLS were more detailed and complete, they were used as the guide. 26/

BLS budgets contain nine basic consumption categories (Table 23). USDA, however, collects periodic price information on some items in only five of these basic categories: food, housing, transportation, clothing, and personal care. These five categories represented 84 percent of total family consumption at the lower standard in autumn of 1974. 28/

An item-by-item analysis of each consumption category showed that the proportion of "matching" elements between the two data series was relatively low (Table 24). For example, BLS shows 132 items in its clothing budget. SRS prices 56 clothing items. However, only 41 of these "matched" items are in the BLS budget. This represents 31 percent of the BLS items. In only one case did more than half of the items in any category match.

The term match should not be interpreted to mean a one to one correspondence between the two data series. The procedure used by SRS to collect data involves sending questionnaires to independent and chain stores operating in rural areas. Retailers are asked to report prices for the kind or quality most commonly purchased by farm families or the price for the line with the largest sales volume. The questionnaire describes only briefly the specifications for each item. The prices should be in effect on the 15th of

Table 23. Major BLS Consumption Categories for Which SRS Collects Price Data on Some Items

BLS consumption categories	SRS matching categories
Food	X
Housing	
Shelter--rent or ownership	
Appliances	X
House furnishings	X
Household operations	X
Transportation	
Auto owners	X
Non-owners	
Clothing and clothing materials	X
Personal care	X
Medical care	
Other family consumption	
Other costs	
Occupational expenses and taxes	

the survey month and do not include state sales taxes. Sales taxes are estimated during data processing. This procedure allows for considerable variation with respect to product quality.

BLS, on the other hand, specifies much more distinctly the materials content, quality, or construction of the item to be priced. On several items, more than one such specification is given which does introduce some quality variation into the estimating procedure. BLS used a variety of pricing techniques for the initial budgeting. For items having a range of qualities or specifications, average prices were computed in five "benchmark" cities. Comparable average prices in other cities were estimated by applying an intercity ratio to the benchmark price. If there was little variation in prices among reporters and items were priced in CPI outlets only or in an expanded sample using CPI techniques, the budget price was the average of reported prices. In some cases, prices were based on an average of mail-order catalog prices. Applicable sales and excise taxes were included in the estimate. The prices collected were primarily for the moderate standard budget. Thus, some adjustments were necessarily made for inclusion in the lower standard budget. Actual price data for items in the BLS budgets were last collected in 1969. Since that time, CPI indexes were used to update individual prices.

The matched items referred to above, thus, mean those items for which the brief description given by SRS make them a potential candidate for inclusion in the BLS group. Because items may match by description does not necessarily mean that SRS prices can be substituted in the BLS budget system. The time of pricing also presents comparability problems. BLS budgets are designed to re-

present those prevailing during the autumn season. SRS prices items periodically throughout the year, but not all items are priced during the fall months. Finally, SRS price estimates are valid only for rural areas at the state level as opposed to the more local orientation of the BLS system. The basic differences between BLS and SRS methodologies in constructing their respective series make the feasibility of combining the two systems extremely tenuous.

Table 24. Item Coverage and "Matches" Between Comparable BLS and SRS Consumption Categories

Expenditure category	No. of Items priced		No. of Items matched	Percentage match is of BLS
	BLS	SRS		
Food	95	62	37	39
Housing				
Shelter	12	5	2	17
Furnishings	37	20	16	43
Textiles	10	5	4	40
Floor coverings	2	3	1	50
Furniture	11	9	5	45
Appliances	7	11	5	71
Housewares	7	1	1	14
Other	3	1	1	33
Household operations	16	6	5	31
Clothing	132	56	41	31
Mens	32	25	16	50
Boys	24	5	5	21
Womens	33	20	15	45
Girls	30	4	4	13
Materials, services	13	2	1	8
Transportation, auto owner	21	21	6	29
Personal care	14	2	2	14

SOURCES: Bureau of Labor Statistics, Three Standards of Living for an Urban Family of Four Persons, Bull. No. 1570-5, U.S. Government Printing Office, Washington, D.C., Spring 1967.

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Office of the Assistant Secretary for Planning and Evaluation
Department of Health, Education, and Welfare
200 Independence Avenue, S. W.
Room 443D, South Portal Building
Washington, D. C. 20201